

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) Apparatus for forming a dye sublimation image in a substrate with a dye carrier having an image formed thereon of a sublimatic dyestuff, the apparatus comprising:
a platen, for disposing thereon the substrate, the substrate having further disposed thereon the dye carrier such that the sublimatic dyestuff is in contact with the substrate;

a membrane for covering the substrate, the dye carrier, and at least a portion of the platen;

a clamping system for applying, with the membrane, a uniform clamping pressure to the substrate and the dye carrier;

a heating device for heating the substrate and the dye carrier from their ambient temperature to a first temperature and for a period of time requisite to form the image in the substrate; and

a cooling device for cooling the substrate and the dye carrier to a second temperature following the heating thereof.

2. (Withdrawn) Apparatus for forming a dye sublimation image in a substrate utilizing a dye carrier having an image formed thereon of a sublimatic dyestuff, the apparatus comprising:

a platen, for disposing thereon a substrate, the substrate having further disposed thereon a dye carrier such that the sublimatic dyestuff is in contact with the substrate;

a membrane for covering the substrate, the dye carrier, and at least a portion of the platen;

an atmospheric clamping system for applying, in operative combination with the membrane, a uniform clamping pressure to the substrate and the dye carrier;

a heating device for heating the substrate and the dye carrier from their ambient temperature to a first temperature and for a period of time requisite to form the image in the substrate while the uniform clamping pressure is applied to the substrate and the dye carrier; and

a cooling device for cooling the substrate and the dye carrier to a second temperature while the uniform clamping pressure is applied to the substrate and the dye carrier, following the heating thereof.

3. (Withdrawn) The apparatus of Claim 2 wherein the heating device further comprises a radiant heating element.

4. (Withdrawn) The apparatus of Claim 3 wherein the radiant heating element is selected from the group consisting of infrared lamp and microwave source.

5. (Withdrawn) The apparatus of Claim 3 wherein the heating device is selected from the group consisting of: radiant heating device, conductive heating device, convective heating device, and the application of open flame.

6. (Withdrawn) The apparatus of Claim 2 wherein the heating device further comprises a conductive heating device.

7. (Withdrawn) The apparatus of Claim 6 wherein the conductive heating device further comprises:

a thermally conductive plate; and
means for heating the thermally conductive plate.

8. (Withdrawn) The apparatus of Claim 6 further comprising
a thermally conductive plate rendered partially hollow by the formation therein of at least one chamber;

a heater for providing a controllable flow of heated fluid through the chamber of the thermally conductive plate; and

a quantity of fluid at least partially filling the chamber of the thermally conductive plate, and rendered controllably heatable by the heater.

9. (Withdrawn) The apparatus of Claim 8 wherein the fluid is selected from the group consisting of gas and liquid.

10-42 (Canceled)

43. (Currently Amended) A method for forming a dye sublimation image in a thermoforming plastic substrate with a dye carrier having an image formed thereon of a sublimatic dyestuff, the method comprising:

placing the image of the dye carrier against a first surface of the thermoforming plastic substrate to form a substrate-dye carrier stack;

heating the substrate-dye carrier stack to a sublimation temperature;

cooling the substrate-dye carrier stack; and

providing a clamping pressure against the first surface of the thermoforming plastic substrate during the heating and the cooling and therebetween; wherein the clamping pressure is provided by:

placing the thermoforming plastic substrate on a platen;

covering the dye carrier, thermoforming plastic substrate, and at least a portion of the platen with a membrane; and

applying a pressure differential across the membrane, wherein the clamping pressure limits warping of the substrate during the heating, cooling, and therebetween.

44. (Previously Presented) The method, as recited in claim 43, wherein the clamping pressure provides a pressure over an entire surface of the dye carrier.

45. (Previously Presented) The method, as recited in claim 43, wherein the clamping pressure provides a pressure of at least 14 pounds per square inch.

46. (Canceled)

47. (Canceled)

48. (Previously Presented) The method, as recited in claim 43, wherein the cooling cools the substrate to a temperature which causes the substrate to be substantially rigid.

49. (Previously Presented) The method, as recited in claim 43, wherein the heating heats to a temperature of between 200° F – 600° F.

50. (Previously Presented) The method, as recited in claim 43, wherein the clamping pressure provides a pressure of between 0.25 atmospheres to 20 atmospheres.

51. (Previously Presented) The method, as recited in claim 43, wherein the clamping pressure is provided by a gas pressure differential to provide the continuous pressure.

52. (Previously Presented) The method, as recited, in claim 43, wherein the heating is to a temperature and for a period of time requisite to sublimate the image into the substrate.

53. (Withdrawn) Apparatus for forming a dye sublimation image in a first surface of a substrate with a dye carrier having an image formed thereon of a sublimatic dyestuff, the apparatus comprising:

a heater for heating the dye carrier to a sublimation temperature;

a cooler for cooling the dye carrier; and

a clamping pressure system for pressing the image formed on the dye carrier against the first surface of the substrate, wherein the continuous pressure system is able to apply a

continuous pressure against the first surface of the substrate when the dye carrier is subjected to the heater and when the dye carrier is subjected to the cooler and there between.

54. (Withdrawn) The apparatus, as recited in claim 53, wherein the clamping pressure system limits shrinking, enlarging, extruding, and warping of the substrate during the heating and cooling.

55. (Withdrawn) The apparatus, as recited in claim 53, wherein the clamping pressure system uses a gas pressure differential to provide the continuous pressure.

56. (Withdrawn) The apparatus, as recited in claim 53, wherein the clamping pressure system provides a pressure over an entire surface of the dye carrier.

57. (Withdrawn) The apparatus, as recited in claim 53, wherein the clamping pressure system provides a pressure of at least 14 pounds per square inch.

58. (Withdrawn) The apparatus, as recited in claim 53, wherein the clamping pressure system limits warping of the substrate during the heating, cooling, and therebetween.

59. (Withdrawn) The apparatus, as recited in claim 53, wherein the clamping pressure system provides an even clamping force over the entire surface of the substrate.

60. (Withdrawn) The apparatus, as recited in claim 53, wherein the cooler cools the substrate to a temperature which causes the substrate to be substantially rigid.

61. (Withdrawn) The apparatus, as recited in claim 53, wherein the heater heats to a temperature of between 200° F – 600° F.

62. (Withdrawn) The apparatus, as recited in claim 53, wherein the clamping pressure system provides a pressure of between 0.25 atmospheres to 20 atmospheres.

63. (Withdrawn) The apparatus, as recited in claim 53, wherein the clamping pressure system is provided by a gas pressure differential to provide the continuous pressure.

64. (Withdrawn) The apparatus, as recited, in claim 53, wherein the heater heats to a temperature and for a period of time requisite to sublimate the image into the substrate.

65. (New) The method, as recited in claim 43, wherein the platen is a perforated platen with perforations forming a plurality of vacuum orifices, wherein the applying a differential pressure comprises applying a vacuum through the plurality of vacuum orifices.